

**THE BRAIN IN BOOKS AND FILM , PSYCH 592, PSYCH 461, NEUR 461, SPRING 2020
DR. JANE FLINN**

OVERVIEW OF THE COURSE.

The films in this course are ones that I have enjoyed watching and frequently have not had time to show, or only to show in part, in classes. A theme running through many of the films is that both genetics and the environment can affect our brains and our behavior, and that the environment can change the brain for good or ill.

There are three required books: My Brain on Fire deals with an unusual and probably under-diagnosed brain illness that can masquerade as schizophrenia. Still Alice is about a woman suffering from Alzheimer's disease, a disease which now impacts many families. There are selections from the third book, Healthy Brain; Happy Life, which emphasizes how important exercise is in our lives. In addition, two chapters from Brainstorm will be made available on Blackboard.

Students should lead a discussion on a sub-set of chapters from one of the required books, and on one of the films. I will review the relevant background for each film beforehand.

Films will be generally be shown on Thursdays, they can often, although not always, be watched at home. Each film will be introduced by me in the previous class, and discussed in the following class, along with one of the books. Three papers, each discussing the implications of one of the required texts are required. In addition students should write an overall review paper (four papers in all). A quiz on each of the films will be available before the film is shown.

This schedule is subject to change if discussion of a topic moves faster or more slowly than anticipated. Video links may change.

Because exercise has been shown to be so important, a 5 minute exercise break will take place in the discussion classes.

JAN 21/23, TUE; The epigenetic revolution; the brain and behavior can be influenced by the environment. Music can have positive influences on the brain. Structure of the brain. forms of memory. The NMDA receptor, JMF.

TH; in class The Musical Brain. (Film)

JAN 28/30, TUE; Discussion of a) The Musical Brain, b) My Brain on Fire(1), Motor and musical memory is spared in Clive Wearing, JMF.

TH; in class, Living without Memory, (Clive Wearing, Mike Forte, You tube)

FEB 5 IS THE FINAL DROP DATE FOR 100% REIMBURSEMENT

FEB 4/6, TUE; Discussion of a) My Brain on Fire(2). b) Clive Wearing. Parkinson's is a motor disease; drug abuse led to PD in young people (JMF).

TH; The Frozen Addict. (Film, possibly available on internet.)

FEB 11/13, TUE; Discussion of a) My Brain on Fire (3). b) The Frozen Addict. c) Effect of exercise in PD, Deep brain stimulation, JMF.

TH,). In class, a) Sybil's Story. b) My Brain on Fire (4).

FEB 18/20, TUE; Discussion of a) Marion in Brainstorm. b) Amy in Brainstorm. Brain changes seen during sleep, (JMF).

TH; What are Dreams? (Film)

FEB 25/27, TUE; a) Discussion of a) What are Dreams? b) My Brain on Fire, summary. c) Brain and behavioral changes seen in Alzheimer's disease (JMF).

TH; Can Alzheimer's be Stopped (film)

MAR 3/5, Discussion of a) Can Alzheimer's be Stopped, Still Alice(1) (book)

TH; Still Alice (Film).

MAR 10/14, **SPRING BREAK**

MAR 17/19, TUE, Discussion on a) Still Alice book(2). b) Still Alice film

Consequences of traumatic brain injury; head injuries incurred while playing football can have serious consequences. The NFL was long unwilling to recognize this. (JMF)

TH League of Denial (Film) Watch at home.

MAR 24/26/, TUE; Discussion, a) League of Denial. b) Still Alice, book (3).

c) Environmental effects on stress, how it may be made worse or relieved. Stress can have negative effects on health and performance in both animals and people. (JMF).

TH Stress, the Silent Killer (Film)

APR 2/4,

TU Discussion a) Still Alice, summary, b) Stress, ...

TH; Healthy Brain (Film)

APR 9/11, TUE; Discussion, a) Healthy Brain book (1), b) Healthy Brain film

c) Birds are smarter than we thought. (Parrots) (JMF)

TH; A Murder of Crows. (Film)

APR 14/16, TU; Discussion, a) Healthy Brain book (2), b) Decision making JMF

TH; Are We in Control of our Decisions? (Ariely) Placebo effect, etc

APR 21/23/, Discussion, a) Healthy brain book (3) b) Illusions (JMF)

TH; Secrets of the Brain, selections. Ramachandran,

APR 28/30/, TU; Healthy Brain, summary

TH; Overall discussion of films and readings.

REQUIRED BOOKS

My Brain on Fire, Cahalan. Still Alice, Genova.

Healthy Brain; Happy Life, Suzuki. Brainstorm, O'Sullivan (2 chapters)

DEC 6 TAKE-HOME SUMMARY PAPER DUE.

Grading Policy:

10% Book chapters discussion leader

10% Film discussion leader

10% General discussion on books

10% General discussion on films

40% Papers on the three required books, and a general review paper at the end on the books and films "What did you learn from the books and films in this class?" (4 papers, 10% each)

20% film quizzes

Quizzes will be posted on Blackboard the Sunday before the scheduled film date. They will be due back Sunday following the film.

Office Hours: Tu/ TH 4:30 -5:30 DKH 2022

Call 993-4107 for an appointment at other times.

E-MAIL jflinn@gmu.edu

Cell phones may not be used in class; I have the right to ask for copies of your notes if you use a computer in class.

Students with disabilities should present documentation to me and appropriate arrangements will be made.

The George Mason Honor code will be followed.

Class cancellation policy: Since the class is in the afternoon, Mason will probably have made an announcement, however, I will also e mail the class the class to give the status. Films can be made up at home. If a discussion group has to be cancelled, I will rearrange the schedule.

Official Communications via GMU E-mail: Mason uses electronic mail to provide official information to students. Examples include communications from course instructors, notices from the library, notices about academic standing, financial aid information, class materials, assignments, questions, and instructor feedback. Students are responsible for the content of university communication sent to their Mason e-mail account and are required to activate that account and check it regularly.

DESCRIPTION OF FILMS

THE MUSICAL BRAIN. Music can have positive influences on the brain. On reserve in Library.

Not on You Tube. Will be shown in class time.

MY BRAIN ON FIRE, Rare Disease mistaken for Mental Illness

MY BRAIN ON FIRE -Encephalitis, on BBC's Women's Hour. 12.47 mins

(Sussanah Cahalan, Brain on Fire ~ 1 hr) This form of newly discovered encephalitis attacking the NMDA receptor produces symptoms similar to those of schizophrenia. People may have been misdiagnosed. Both of these show Sussanah herself. Netflix has the movie.

Video Link: <https://www.youtube.com/watch?v=yAQs2pmN3Sg&feature=youtu.be&t=3m5s>

THE FROZEN ADDICT. Designer drugs led to Parkinson's Disease (PD) in young people. The current synthetic marijuana epidemic is causing similar unpredictable and dangerous consequences.

Video Link: http://openvault.wgbh.org/catalog/V_474CF2C8A20B4173988486AC4C605A3C

SYBIL'S STORY. Deep brain stimulation can control PD. (Deep brain stimulation is now being used for depression and Alzheimer's disease.)

Video Link: <https://www.youtube.com/watch?v=xejclvbwbsk> (Part 1)

<https://www.youtube.com/watch?v=IOHtUzW02cg> (Part 2)

SECRETS OF THE BRAIN, Ramachandran, (Film selections).

WHAT ARE DREAMS. What benefits does sleep have? Sleep may help learning, due to replay of the day's events. Sleep disorders. Will be shown in class.

STILL ALICE. (Rent, e.g. on Netflix, or purchase.) Also available in the library on reserve. Alzheimer's disease is a growing problem, leading to memory loss, in some cases personality changes, and increased difficulties in living independently. Not on You Tube.

CAN ALZHEIMER'S DISEASE BE STOPPED? (You tube)

LEAGUE OF DENIAL: THE NFL's CONCUSSION CRISIS (LOD). Head injuries incurred while playing football can have serious consequences. The NFL was long unwilling to recognize this. First part will be shown in class time.

Video Link: <http://www.pbs.org/video/2365093675/>

Alternate video link: <https://www.youtube.com/watch?v=SedClkAnclk>

STRESS, PORTRAIT OF A KILLER , Stress can have negative effects on health and performance in both animals and people. It can be induced by social factors, but a positive environment can reduce stress. (Sapolsky)

Video Link: <https://www.youtube.com/watch?v=eYG0ZuTv5rs>

A MURDER OF CROWS (National Geographic) Crows show sophisticated learning and memory abilities. Will be shown in class time.

Watch at home; Alex the Smart Parrot (11:50)

Video Link: <https://www.youtube.com/watch?v=cO6XuVlcEO4>

HEALTHY BRAIN, HAPPY LIFE , Exercise can improve our mood, our memory, and our health. <https://www.youtube.com/watch?v=U5UuBVAFZJw>

ARE WE IN CONTROL OF OUR DECISIONS. (Ariely) + personal choice. What we believe can affect our decisions. The decisions we make can be influenced by how the question is posed. Placebo Effect.

Video Link: <https://www.youtube.com/watch?v=9X68dm92HVI>